JUN 1 2 1992

I 53.17 2:991/11

BUREAU OF LAND MANAGEMENT MONTHLY ALERT

BLM Library Denver, CO

October 1991

CONTIN

About the MONTHLY ALERT ...

Forestry Topics

1. Forests and Forestry
General treatments of the subject; forestry and society; topical issues; education; agency annual reports.

2. Forest Operations
a. Silviculture: silvicultural systems; economics; stand improvement; measurement; operations management; natural and artifical regeneration, genetics.
b. Engineering: road construction; protective works; logging; equipment.

3. Forest Injury and Protection
Insect damage and control; pesticide applications; insect and disease surveys; forest pathology.

4. Fire Management
All aspects, including presuppression, prevention education, behavior; fire weather.

5. Watershed Management, with Soil and Site Factors
Hydrology; runoff; sedimentation; erosion; climatology; meteorology; habitat regions; precipitation.

6. Range and Wildlife Management

7. Forest Recreation

8. Forest Products Research
Wood technology and utilization; markets and marketing; forest products industries.

Allied Topics

9. Life Sciences
Plant and animal ecology; botany; environmental quality; biochemistry; zoology; physiology; animal genetics.

10. Computer Science, Statistics and Mathematics

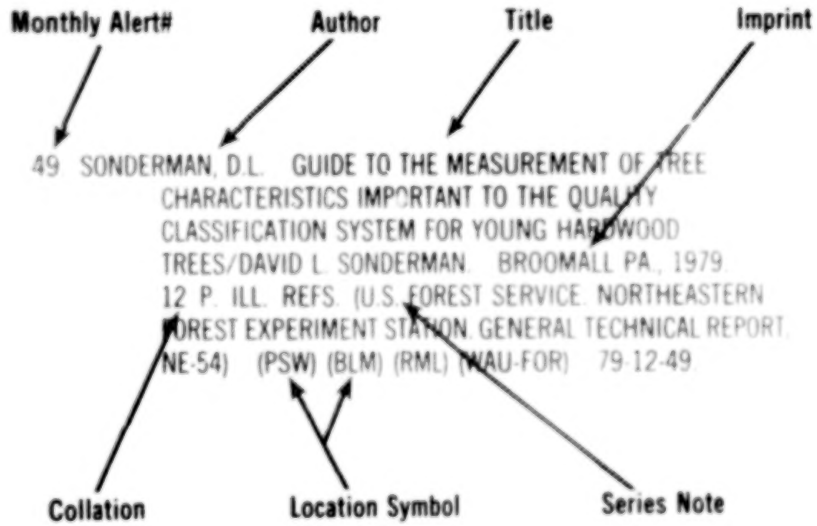
11. Social Sciences
Environmental policy; regional planning; landscape analysis and planning; behavioral psychology; personnel management; office procedure and management.

12. Other Topics

The citations listed in this **Alert** are arranged in broad topical categories. This permits browsing by subject interest.

The **Species Index** and the **Subject Index** on the following pages identify individual citations by narrower, specific topics, e.g., management treatments, problem areas, and geographic locations.

Sample ***Monthly Alert*** Citation:



About Bureau of Land Management *Monthly Alert*

Bureau of Land Management *Monthly Alert* announces recent publications significant to natural resources management and research. These publications are located and made available through an interagency agreement between BLM and the USFS Forest Information Network. Subject areas are generally limited to renewable resources and fire management.

Most items listed in each ***Monthly Alert*** are reprints of current journal articles or research papers. They are sent to you at your office without charge upon receipt of your order (see inside back cover). Books and other large documents will be loaned to you for a specific period of time. Those items available for loan only are identified by a • beside the item in the citation.

The ***Monthly Alert*** is available to all BLM employees. It is operated by the BLM Library, Service Center, Denver, Colorado. BLM employees are cautioned not to use ***Monthly Alert*** services from Forest Service Service Centers. The BLM Library now provides these services.

About the BLM Library

The BLM Library is located at the Service Center. It performs a full range of library services for all BLM personnel at no charge. It has computer-based literature searching capability for all subject areas. Literature searches may be requested on BLM Form 1279-2. The BLM Library has extensive reference and access to libraries of every government agency, universities, private institutions and foreign governments. If you have a need for library assistance that cannot be obtained locally, contact:

BLM Library
Service Center, SC-653
Denver Federal Center
Denver, CO 80225

Monthly Alert	Reference
***FTS 776-6434**	***FTS 776-6649**
***Com (303) 236-6434**	***Com (303) 236-6649**

I

BLM-ALERT!

Note that there is no Management Alert section this month. The next appearance will be in the November Alert issue.

ANNOUNCING A NEW SERVICE!

FOR SOME TIME THE BUREAU LIBRARY HAS WANTED TO ADD A LARGER SECTION ON GEOLOGY AND GEOLOGICAL TOPICS TO THE MONTHLY ALERT IN RESPONSE TO NUMEROUS REQUESTS. UNFORTUNATELY, STAFFING AND TIME SHORTAGES DELAYED IMPLEMENTING THIS NEW SERVICE.

SO IT IS WITH GREAT PRIDE THAT WE INTRODUCE THE GEOLOGY SECTION TO THE MONTHLY ALERT. THIS WILL BE A REGULAR PART OF OUR SERVICE IN THE FUTURE. ORDER DOCUMENTS THE SAME WAY AS FOR ALL OTHER SECTIONS OF THE ALERT, BY LISTING THE NUMBERS PRECEDING EACH DOCUMENT. BE SURE TO INCLUDE THE LETTER G TO AVOID CONFUSION WITH OTHER ALERT DOCUMENTS.

WE SINCERELY HOPE THIS IMPROVEMENT ADDS TO THE USEFULNESS OF THIS PUBLICATION FOR ALL BLM EMPLOYEES.

IC

010. FORESTRY--GENERAL

1. The Battle brews. Forest watch; Vol. 11, no. 10 (May 1991): p. 13-15.

5. Cline, R. G.; Loftus, N. S. Forest productivity : lessons to be learned. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 1-3. (General technical report INT ; 280).

6. Comanor, J. M. Can we both make it? : Dual career decision-making for mid-level professionals. Economic & social development : a role for forests & forestry professionals : proceedings of the 1987 Society of American Foresters National Convention, Minneapolis, Minnesota, October 18-21. Bethesda, Md. : The Society, c1988: p. 391-393. (SAF publication ; 87-02).

8. Fish & Wildlife Service proposes critical habitat for the northern spotted owl. Forest watch; Vol. 11, no. 10 (May 1991): p. 8-9.

11. Forestry program for Oregon. [Salem, Or.]: Oregon Board of Forestry; 1990: 39 p.

12. Franklin, J. F.; Juday, G. P. An interview with Jerry F. Franklin, Bloedel Professor of Forestry, University of Washington. Natural areas journal; Vol. 10, no. 4 (Oct. 1990): p. 163-172.

13. Hanaway, D. J. History of the Chippewa treaty rights controversy. Timber producer; No. 9 (Sept. 1990): p. 34-36, 38-39, 46-48, 50-53.

23. Pardo, R. D. The institutional response : multilateral technical assistance agencies. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 399-406. (SAF publication ; 90-02).

26. Sample, V. A. A framework for public participation in natural resource management decisions : the case of National Forest planning. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 293-297. (SAF publication ; 90-02).

27. Sample, V. A. The greening of forestry : issues for the 1990s or global climate change and foresters. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 435-437. (SAF publication ; 90-02).

28. Sesco, J. A.; Bey, C. F.; Weber, B. C. Implementing the "Strategy for the 90's for USDA Forest Service Research". Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 432-434. (SAF publication ; 90-02).

29. Shands, W. E. Communication : a continuing forestry challenge. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 464-468. (SAF publication ; 90-02).

30. St. Clair, J. Notes for the neo-West. Forest watch; Vol. 11, no. 10 (May 1991): p. [S1]-S4.

31. St. Clair, J. Owl calls. Forest watch; Vol. 11, no. 8 (Mar. 1991): p. 8-9.

33. Steen, H. K. The beginning of the National Forest System. [Washington, D.C.]: U.S. Dept. of Agriculture, Forest Service; 1991: v, 37 p. (FS (United States. Forest Service); 488).

012. METHODOLOGY AND ADVANCED TECHNOLOGY

38. Broad, L. R. Area conservation mechanisms associated with forest management. New Zealand journal of forestry science; Vol. 20, no. 1 (1990): p. 120-126.

39. Cheslak, E. F.; Jacobson, A. S. Integrating the instream flow incremental methodology with a population response model. Rivers (Fort Collins, Colo.); Vol. 1, no. 4 (Oct. 1990): p. 264-286.

43. Davis, L. S.; Marose, R.; DeLain, L. I. CALPLAN : a model to simulate outputs from California's forests and rangelands under alternative futures. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 29-42. (SAF publication ; 86-03).

44. Dykstra, D. P.; McTague, J. P. Using a GIS for decision

support in unevenaged harvest scheduling. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 359-364. (SAF publication ; 90-02).

45. Griscom, E. S. Representing expert opinion in a decision support system. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 455-462. (SAF publication ; 86-03).

47. Hatcher, K. J. Cost-effective design of natural resources management studies. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 418-431. (SAF publication ; 6-03).

50. Lembersky, M. R.; Chi, U. H. Decision simulators : combining interactive graphics and operations research to improve operations. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 432-436. (SAF publication ; 86-03).

51. Massey, J. G.; Sippola, A. E. Integrating operations research techniques into forest industry knowledge-based systems. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 374-378. (SAF publication ; 90-02).

52. Mendoza, G. A.; Bare, B. B. Fuzzy programming approaches in handling uncertainty and imprecision in timber harvest scheduling. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 333-338. (SAF publication ; 90-02).

60. Weeks, J. Modeling as a tool in pesticide risk assessment. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 463-475. (SAF publication ; 86-03).

61. Wenny, D. L. LOTUS 123 [trademark] template for nutrient calculation. Tree planters' notes; Vol. 40, no. 2 (spring 1989): p. 5-7.

020. FOREST ECONOMICS

65. Farnum, P.; Lembersky, M. R. Combining simulation and judgment for optimal forest management decision making. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 377-385. (SAF publication ; 86-03).

66. Federal timber sales : legislative and administrative assistance provided to timber purchasers : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1989: 18 p.

67. Federal timber sales : process for appraising timber offered for sale needs to be improved : report to the congressional requesters. Washington, D.C.: GAO: 1990: 50 p.

74. Mann, J. W. Proposals for alternative silvicultural practices and "New Forestry" : are we on the right track?. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 313-317. (SAF publication ; 90-02).

77. Recalculating TRSPIRS. Forest watch; Vol. 11, no. 8 (Mar. 1991): p. S1-S4.

79. Row, C. What are multiple use and sustained yield in the new political economy of forestry?. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 321-327. (SAF publication ; 90-02).

80. Schweitzer, D. L. Comments on "What are multiple use and sustained yield in the new political economy of forestry?" by Clark Row. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 330-332. (SAF publication ; 90-02).

81. Shafer, E. L.; Elsner, G. H. Human resources management for the 90's. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 345-352. (SAF publication ; 90-02).

85. Webster, H. H. Some observations on sustainable development of forest resources. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 318-320. (SAF publication ; 90-02).

030. FOREST ENGINEERING

87. Sessions, J. A heuristic algorithm for the solution of the variable and fixed cost transportation problem. The 1985 Symposium on Systems Analysis in Forest Resources : proceedings of a Society of American Foresters symposium held at the Georgia Center for Continuing Education, Athens, Georgia, December 9-11, 1985. Athens, Ga. : The Center, c1987: p. 324-336. (SAF publication ; 86-03).

040. FOREST MENSURATION

89. Birdsey, R. A. Carbon budget realities at the stand and forest level. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 181-186. (SAF publication ; 90-02).

90. Colenutt, M. E.; Luckman, B. H. Dendrochronological investigation of Larix lyallii at Larch Valley, Alberta. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1222-1233.

91. Collins, D. C.; Conner, R. C. Forest statistics for land outside National Forests in northwestern Montana, 1989. Ogden, UT: U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station; 1991: 47 p. (Resource bulletin INT; 73).

92. DeForest, C. E. Timberland "erosion" : urbanization and the loss of timberland. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 569-570. (SAF publication ; 90-02).

94. Dippon, D. R. Land information systems & management decisions : future needs. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 365-370. (SAF publication ; 90-02).

95. Forbes, T. R.; Rossiter, D.; Van Wambeke, A. Guidelines for evaluating the adequacy of soil resource inventories. Washington, D.C.: Soil Management Support Services, U.S. Dept. of Agriculture; 1987 printing: ii, 51 p. (SMSS technical monograph; no. 4).

96. Forest Service : status of geographic information system acquisition : report to the chairman, Subcommittee on Interior, Committee on Appropriations, House of Representatives. Washington, D.C.: GAO; 1989: 8 p.

98. Jasumback, T. A facility for evaluating satellite-based positioning systems. [Missoula, Mont.]: U.S. Dept. of Agriculture, Forest Service, Technology & Development Program; 1988: [4] p. (Equip tips; 8871 2311).

99. Jensen, M.; Green, P. An integrated approach for riparian inventory. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 237-244. (General technical report INT ; 280).

101. Koch, P.; Schlieter, J. Spiral grain and annual ring width in natural unthinned stands of lodgepole pine in North America. Ogden, UT: U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station; 1991: 55 p. (Research paper INT; 449).

104. Magill, A. W. Monitoring environmental change with color slides : developing visual sensitivity. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 597-598. (SAF publication ; 90-02).

105. Mazaika, R.; Krausman, P. R. Use of dry-weight rank multipliers for desert vegetation. Journal of range management; Vol. 44, no. 4 (July 1991): p. 409-411.

106. McDonald, M. A.; Malcolm, D. C.; Harrison, A. F. The use of a 32P root bioassay to indicate the phosphorus status of forest trees. 2, Spatial variation. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1185-1193.

107. McDonald, M. A.; Malcolm, D. C.; Harrison, A. F. The use of a 32P root bioassay to indicate the phosphorus status of forest trees. 1, Seasonal variation. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1180-1184.

111. National register of big trees : a program of the American Forestry Association. Washington, D.C.: The Association; [1990?]: 48 p.

113. Redlin, M. J. Comparison of regression models for biomass estimation of young Douglas-fir in western Washington; 1988: vi, 168 leaves. Thesis (M.S.)--University of Washington, 1988.

114. Reisinger, T. W. A GIS approach to opportunity area analysis on a National Forest. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 353-358. (SAF publication ; 90-02).

115. Rietveld, W. J.; Ryker, R. A. Application of portable data recorders in nursery management and research. Tree planters' notes; Vol. 40, no. 1 (winter 1989): p. 3-10.

116. Riitters, K. H.; Ohmann, L. F.; Grigal, D. F. Woody tissue analysis using an element ratio technique (DRIS). Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1270-1277.

117. Sims, D. H. How to classify upland forest sites. Forest farmer; Vol. 46, no. 3 (Jan. 1987): p. 8-9.

119. Warrington, G. E. Using soils data to develop a National Forest management plan. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 175-179. (General technical report INT ; 280).

122. Wondra, P. Using geographic information systems to manage natural resources. Trends; Vol. 27, no. 4 (1990): p. 38-42.

124. Youtz, J. A.; Hendricks, A. D. The use of satellite imagery for woodland inventory and management planning : a case study. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 567-568. (SAF publication ; 90-02).

125. Zuuring, H. Estimating forest productivity from remotely sensed data and topographic variables using the spatial analysis capabilities of a GIS. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 183-187. (General technical report INT ; 280).

050. SILVICULTURE

128. Woodman, J. N. Adapting silviculture to forests impacted by climatic change. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 204-207. (SAF publication ; 90-02).

051. ARTIFICIAL REGENERATION

130. Buse, L. J.; Day, R. J. Conditioning three boreal conifers by root pruning and wrenching. Tree planters' notes; Vol. 40, no. 2 (spring 1989): p. 33-39.

131. Di-Giovanni, F.; Kevan, P. G. Factors affecting pollen dynamics and its importance to pollen contamination : a review. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1155-1170.

132. Jones, B.; Alm, A. A. Comparison of planting tools for containerized seedlings : two-year results. Tree planters' notes; Vol. 40, no. 2 (spring 1989): p. 22-24.

052. SILVICULTURAL METHODS

145. Adams, P. W.; Flint, A. L.; Fredriksen, R. L. Long-term patterns in soil moisture and revegetation after a clearcut of a Douglas-fir forest in Oregon. Forest ecology and management; Vol. 41, nos. 3/4 (July 16, 1991): p. 249-263. PNW-85-382.

146. Bosworth, B.; Studer, D. Comparisons of tree height growth on broadcast-burned, bulldozer-piled, and non-prepared sites 15 to 25 years after clearcut logging. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 197-200. (General technical report INT ; 280).

147. De Grosbois, T.; Kershaw, G. P.; Eyton, J. R. The regrowth production and allocation of Salix arbusculoides in three growing seasons following right-of-way clearing. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1171-1179.

148. Evans, J.; Hibberd, B. G. Managing to diversify forests. Arboricultural journal; Vol. 14, no. 4 (Nov. 1990): p. 373-379.

153. Murray, M. D.; Coble, D.; Curtis, R. O. Height growth of

young Pacific silver fir and noble fir established on clearcuts in the Pacific silver fir zone of western Washington. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1213-1221.

154. O'Hara, K. L. Forest pruning bibliography. Seattle, Wash.: College of Forest Resources, University of Washington; 1989: iii, 74 p. (Contribution (University of Washington. Institute of Forest Resources); no. 67).

155. Oliver, C. D.; Kershaw, J. A.; Hinckley, T. M. Effect of harvest of old growth Douglas-fir and subsequent management on carbon dioxide levels in the atmosphere. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 187-192. (SAF publication ; 90-02).

060. GENETICS/PLANT BREEDING

160. Connor, K. F.; Towill, L. E.; Sowa, S. Tree pollen preservation at the National Seed Storage Laboratory. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 579-580. (SAF publication ; 90-02).

166. King, J. N.; Burdon, R. D. Time trends in inheritance and projected efficiencies of early selection in a large 17-year-old progeny test of Pinus radiata. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1200-1207.

173. Samuel, C. J. A. The estimation of genetic parameters for growth and stem-form over 15 years in a diallel cross of Sitka spruce. Silvae genetica; Vol. 40, no. 2 (1991): p. 67-72.

174. Yazdani, R.; Lebreton, P. Inheritance pattern of the flavonic compounds in Scots pine (Pinus sylvestris L.). Silvae genetica; Vol. 40, no. 2 (1991): p. 57-59.

071. SYSTEMATIC BOTANY

177. Rosentreter, R.; Kelsey, R. G. Xeric big sagebrush, a new subspecies in the Artemisia tridentata complex. Journal of range management; Vol. 44, no. 4 (July 1991): p. 330-335.

072. ANATOMY/MORPHOLOGY

178. Ceulemans, R.; Isebrands, J. G. Crown architecture in relation to productivity of Populus clones in the Pacific Northwest, U.S.A. Forest tree physiology. Paris : Editions Scientifiques Elsevier, 1989: p. 199s-201s.

179. Hetrick, B. A. D.; Wilson, G. W. T.; Leslie, J. F. Root architecture of warm- and cool-season grasses : relationship to mycorrhizal dependence. Canadian journal of botany; Vol. 69, no. 1 (Jan. 1991): p. 112-118.

180. Ries, R. E.; Hofmann, L. Research observations : standardized terminology for structures resulting in emergence and crown placement of 3 perennial grasses. Journal of range management; Vol. 44, no. 4 (July 1991): p. 404-407.

073. PLANT PHYSIOLOGY

183. Andersen, C. P. Ozone decreases spring root growth and root carbohydrate content in ponderosa pine the year following exposure. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1288-1291.

185. Cureton, P. M.; Groenevelt, P. H.; McBride, R. A. Landfill leachate recirculation : effects on vegetation vigor and clay surface cover infiltration. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 17-24.

186. DeHayes, D. H. Ambient cloud deposition reduces cold tolerance of red spruce seedlings. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1292-1295.

191. Koehn, A.; McDonald, G. I. A method for photosynthetic calibration of process models for conifer ecosystems. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 244-249. (General technical report INT ; 280).

193. Sheppard, S. C. A field and literature survey with interpretation of elemental concentrations in blueberry (Vaccinium angustifolium). Canadian journal of botany; Vol. 69, no. 1 (Jan. 1991): p. 63-77.

074. PLANT ECOLOGY

195. Cobb, D. F. Development of mixed western larch, lodgepole pine, Douglas-fir, and grand fir stands in eastern Washington; 1988: viii, 99 leaves. Thesis (M.S.)--University of Washington, 1988.

197. Green, P.; Jensen, M. Plant succession within managed grand fir forests of northern Idaho. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 232-236. (General technical report INT ; 280).

198. Hook, D. D.; Murray, M. D.; DeBell, D. S. A Technique for assessing the influence of shallow water table levels on red alder (Alnus rubra Bong.) family performance. Wetland and riparian ecosystems of the American West : Eighth Annual Meeting of the Society of Wetland Scientists, May 26-29, 1987, Seattle, Washington. [Denver, Colo. : Planning Information Corp., 1987?]: p. 248-252.

199. Jensen, M. E. Ecological classification and cumulative soil effects. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 218-223. (General technical report INT ; 280).

200. Jensen, M. E.; McNicoll, C. H.; Prather, M. Application of ecological classification to environmental effects analysis. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 24-30.

201. Packham, J. R.; Cohn, E. V. J. Ecology of the woodland field layer. Arboricultural journal; Vol. 14, no. 4 (Nov. 1990): p. 357-371.

203. Steele, R. W.; Pfister, R. D. Western-montane plant communities and forest ecosystem perspectives. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 20-28. (General technical report INT ; 280).

204. Tiner, R. W. The concept of a hydrophyte for wetland identification. BioScience; Vol. 41, no. 4 (Apr. 1991): p. 236-246.

081. MYCOLOGY/PATHOLOGY

208. Amaranthus, M. P. Factors affecting ectomycorrhizae and forest regeneration following disturbance in the Pacific Northwest. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 205-208. (General technical report INT ; 280).

214. McDonald, G. I. Connecting forest productivity to behavior of soil-borne diseases. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 129-144. (General technical report INT ; 280).

083. HARMFUL VEGETATION

231. McCollum, W. A. Velpar [registered] ultra-low-weight [trademark] herbicide : a new concept designed for forestry. Proceedings, Southern Weed Science Society : a proud past, a promising future, 40th annual mtg., January 12, 13, 14, 1987, Orlando, Fl. [Champaign, Ill.? : The Society, 1987]: p. 217-219.

232. McDonald, P. M.; Fiddler, G. O. Growth and treatment costs after release of Douglas-fir seedlings on the Klamath National Forest. Proceedings : Eighth Annual Forest Vegetation Management Conference, November 5-6, 1986, ... Sacramento, California. Redding, Calif. : printed by the Conference, 1987: p. 56-63.

233. McLemore, B. F. Comparison of herbicides and mixtures for tree injection. Proceedings, Southern Weed Science Society : a proud past, a promising future, 40th annual mtg., January 12, 13, 14, 1987, Orlando, Fl. [Champaign, Ill.? : The Society, 1987]: p. 221-223.

240. Weatherspoon, C. P. Preharvest prescribed burning for vegetation management : effects on Ceanothus velutinus seeds in duff and soil. Proceedings : Ninth Annual Forest Vegetation Management Conference, November 4-5, 1987 ... Redding, California. Redding, Calif. : printed by the Conference, 1988: p. 125-141.

084. ENVIRONMENTAL INJURY

245. Air pollution : protecting parks and wilderness from nearby pollution sources : report to the chairman, Environment, Energy and Natural Resources Subcommittee, Committee on Government Operations, House of Representatives. Washington, D.C.: GAO; 1990: 35 p.

247. Bush, P. B.; Taylor, J. W.; McMahon, C. K.; Neary, D. G. Residues of lindane and chlorpyrifos in firewood and woodsmoke. Journal of entomological science; Vol. 22, no. 2 (Apr. 1987): p. 131-139.

250. Cartwright, C. W.; Meier, S. Preserving natural conditions

: threats from exotic species, air pollution, and other factors threats to wilderness. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 258-263. (SAF publication ; 90-02).

252. Gorissen, A.; Schelling, G. C.; van Veen, J. A. Concentration-dependent effects of ozone on translocation of assimilates in Douglas fir. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 169-173.

254. Joseph, D. Air - a natural resource. Trends; Vol. 27, no. 4 (1990): p. 22-25.

255. Tompkins, D. Mount St. Helens and christmas trees. American christmas tree journal; Vol. 35, no. 2 (Apr. 1991): p. 52-54.

256. Weaver, L. A. Proceedings, sixth annual Gatlinburg Acid Rain Conference : October 30 and 31, 1989, Quality Inn-Glenstone, Gatlinburg, Tennessee. Knoxville, Tenn.: Tennessee Valley Authority; 1989: xv, 101 p.

090. FOREST FIRES

258. Alexander, M. E. Computer calculation of the Keetch-Byram Drought Index : programmers beware! Fire management notes; Vol. 51, no. 4 (1990): p. 23-25.

259. Bradshaw, L. S.; Andrews, P. L. FCFAST : Fort Collins Fire Access Software. Fire management notes; Vol. 51, no. 4 (1990): p. 26-27. INT-88343-COA.

260. Brooks, G.; Fuchs, F. Hurricane Hugo and the CL-215. Fire management notes; Vol. 51, no. 4 (1990): p. 28-31.

261. Cortner, H. J.; Swinford, R. M.; Williams, M. R. Wildland-urban interface emergency responses : what influences them? Fire management notes; Vol. 51, no. 4 (1990): p. 3-8.

262. Couch, R. W. Wildfire in the wilderness. Forests and people; Vol. 37, no. 2 (2nd quarter 1987): p. 4-5, 28-30.

263. Davis, J. B. The wildland-urban interface : a focus on fire protection. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 529-534. (SAF publication ; 90-02).

264. Federal fire management : limited progress in restarting the prescribed fire program : report to the chairman, Environment, Energy, and Natural Resources Subcommittee, Committee on Government Operations, House of Representatives. Washington, D.C.: GAO; 1990: 15 p.

265. Peterson, J. L.; Sandberg, D. V. A national PM10 emissions inventory approach for wildfires and prescribed burning. Transactions PM-10 implementation of standards : an APCA/EPA International Specialty Conference : 1988 February 23-24, San Francisco, CA. Pittsburg, PA : Air pollution Control Association, 1988: p. 353-371.

266. Saveland, J. M. DELPHI : a decision support system for wilderness fire management. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 379-384. (SAF publication ; 90-02).

267. Shovic, H. F. The Greater Yellowstone Area fires of 1988 : recovery. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 201-204. (General technical report INT ; 280).

268. Sinnett, G. M. Fire weather 1989 summary. [Olympia, Wash.?]: Washington State Dept. of Natural Resources, Division of Fire Control, [1989?]: 25 p.

269. Weatherspoon, C. P. Evaluating fire damage to trees. Proceedings : Ninth Annual Forest Vegetation Management Conference : November 4-5, 1987, ... Redding, California. Redding, Calif. : printed by the Conference, 1988: p. 106-110.

270. Werth, P.; Ochoa, R. The Haines Index and Idaho wildfire growth. Fire management notes; Vol. 51, no. 4 (1990): p. 91-13.

101. FOREST SOILS

271. Aschmann, S. G. Nitrogen status of forest floor, soils, and vegetation following municipal wastewater sludge application. Journal of environmental quality; Vol. 19, no. 4 (Oct./Dec. 1990): p. 687-694.

272. Bickelhaupt, D. H. The long-term effect of a single application of horse manure on soil pH. Tree planters' notes; Vol. 40, no. 1 (winter 1989): p. 31-33.

273. Binkley, D. Connecting soils with forest productivity.

Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 66-69. (General technical report INT ; 280).

274. Bockheim, J. G.; Burns, S. F. Pergelic soils of the western contiguous United States : distribution and taxonomy. Arctic and alpine research; Vol. 23, no. 2 (May 1991): p. 206-212.

275. Clayton, J. L. Soil processing of air pollutants in the montane West. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 157-160. (General technical report INT ; 280).

276. Cochran, P. H.; Hopkins, W. E. Does fire exclusion increase productivity of ponderosa pine? Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 224-228. (General technical report INT ; 280).

277. Craul, P. J. The urban soil environment : properties of natural and disturbed soils. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 219-224. (SAF publication ; 90-02).

278. DeBano, L. F. The effect of fire on soil properties. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 151-156. (General technical report INT ; 280).

279. Edmonds, R. L. Organic matter decomposition in western United States forests. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 118-128. (General technical report INT ; 280).

280. Everett, R. L.; Zabowski, D.; McColley, P. Vegetative restoration of western-montane forest soils. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 161-166. (General technical report INT ; 280).

281. Faber, B. A. A method for measuring hyphal nutrient and water uptake in mycorrhizal plants. Canadian journal of botany; Vol. 69, no. 1 (Jan. 1991): p. 87-94.

282. Fisher, R. F. Soil information : a valuable tool for management of western-montane forests. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 4-5. (General technical report INT ; 280).

283. Ford, G. L.; Eramian, A. Soil management of seed orchards and early selection trial plantations in northern Idaho. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 230-232. (General technical report INT ; 280).

284. Geist, J. M.; Cochran, P. H. Influences of volcanic ash and pumice deposition on productivity of western interior forest soils. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 82-89. (General technical report INT ; 280).

285. Geist, J. M.; Meurisse, R. T.; Max, T. A. Monitoring forest soil properties to maintain productivity. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 90-94. (General technical report INT ; 280).

286. Graham, R. T.; Minore, D.; Harvey, A. E.; Jurgensen, M. F. Soil management as an integral part of silvicultural systems. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 59-64. (General technical report INT ; 280).

287. Guerrant, D. G. Site-specific erosivity evaluation of a Sierra Nevada forested watershed soil. Journal of environmental quality; Vol. 20, no. 2 (Apr./June 1991): p. 396-402.

289. Harvey, A. E.; Graham, R. T.; Page-Dumroese, D. S. Ectomycorrhizal activity and conifer growth interactions in western-montane forest soils. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 110-117. (General technical report INT ; 280).

290. Harvey, A. E.; Graham, R. T.; Page-Dumroese, D. S. Organic matter function in the western-montane forest soil system. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 95-100. (General technical report INT ; 280).

291. Harvey, A. E.; Neuenschwander, L. F. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT: Intermountain Research Station; 1991: 254 p. (General technical report INT; 280).

292. Hendrickson, O. Q. Use of acetylene reduction for estimating nitrogen fixation in woody debris. Soil Science Society of America journal; Vol. 52, no. 3 (May/June 1988): p. [840]-844.

293. Hironaka, M.; Fosberg, M. A.; Neiman, K. E. The relationship between soils and vegetation. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 29-31. (General technical report INT ; 280).

294. Hungerford, R. D.; Harrington, M. G.; Frandsen, W. H.; Ryan, K. C.; Niehoff, G. J. Influence of fire on factors that affect site productivity. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 32-50. (General technical report INT ; 280).

295. Jurgensen, M. F.; Tonn, J. R.; Graham, R. T.; Harvey, A. E.; Geier-Hayes, K. Nitrogen fixation in forest soils of the inland Northwest. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 101-109. (General technical report INT ; 280).

296. Klock, G. O. Potential use of geographic information systems to enhance forest soil management. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U. S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 180-182. (General technical report INT ; 280).

297. Megahan, W. F. Erosion and site productivity in western-montane forest ecosystems. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 146-150. (General technical report INT ; 280).

298. Megahan, W. F.; Monsen, S. B.; Wilson, M. D. Probability of sediment yields from surface erosion on granitic roadfills in Idaho. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 53-60.

299. Meurisse, R. T.; Robbie, W. A.; Niehoff, G. J.; Ford, G. Dominant soil formation processes and properties in western-montane forest types and landscapes : some implications for productivity and management. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 7-19. (General technical report INT ; 280).

300. Molina, R. J.; Amaranthus, M. Rhizosphere biology : ecological linkages between soil processes, plant growth, and community dynamics. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 51-58. (General technical report INT ; 280).

302. Page-Dumroese, D. S.; Graham, R. T.; Harvey, A. E. Soil organic matter effects on Douglas-fir growth in northern Idaho soil. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 249-252. (General technical report INT ; 280).

305. Pouyat, R. V. The urban-rural gradient : an opportunity to better understand human influences on forest soils. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 212-218. (SAF publication ; 90-02).

306. Powers, R. F. Are we maintaining the productivity of forest lands? : Establishing guidelines through a network of long-term studies. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 70-81. (General technical report INT ; 280).

307. Puffer, A. Legal perspectives related to soil resources management. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 172-174. (General technical report INT ; 280).

308. Rogers, R. D.; Schumm, S. A. The effect of sparse vegetative cover on erosion and sediment yield. Journal of hydrology;

Vol. 123, nos. 1/2 (Feb. 1991): p. 19-24.

309. Sidle, R. C. A conceptual model of changes in root cohesion in response to vegetation management. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 43-52.

310. Sommer, M.; Adams, D.; Mahler, R. Soil properties as a factor in regeneration failures in the grand fir mosaic : preliminary results. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 253-254. (General technical report INT ; 280).

311. Stark, N. M.; Zuuring, H. Minimizing the adverse impacts of timber harvest in the northern Rocky Mountains. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 209-213. (General technical report INT ; 280).

312. Verbyla, D. L. Validation of soil-site models. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 214-217. (General technical report INT ; 280).

313. Ziemer, R. R.; Lisle, T. E.; Lewis, J.; Rice, R. M. Modeling the cumulative watershed effects of forest management strategies. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 36-42.

102. HYDROLOGY

315. Bouten, W.; Bosveld, F. C. Microwave transmission, a new tool in forest hydrological research : reply. Journal of hydrology; Vol. 125, nos. 3/4 (July 1991): p. 313-317.

316. Bouten, W.; Swart, P. J. F.; Water, E. de. Microwave transmission, a new tool in forest hydrological research. Journal of hydrology; Vol. 124, nos. 1/2 (Apr. 1991): p. 119-130.

317. Burn, D. H.; Goulter, I. C. An approach to the rationalization of streamflow data collection networks. Journal of hydrology; Vol. 122, nos. 1/4 (Jan. 1991): p. 71-91.

318. Calder, I. R. Microwave transmission, a new tool in forest hydrological research : comment. Journal of hydrology; Vol. 125, nos. 3/4 (July 1991): p. 311-312.

319. Calver, A.; Binning, P. On modelling hillslope water flow paths and travel times. Journal of hydrology; Vol. 121, nos. 1/4 (Dec. 15, 1990): p. 335-344.

320. Edwards, P. J.; Helvey, J. D. Long-term ionic increases from a central Appalachian forested watershed. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 250-255.

321. Frasier, G. W.; Simper, S. L. Water catchment on the Fort Apache Indian Reservation. Rangelands; Vol. 13, no. 3 (June 1991): p. 133-136.

322. Hornberger, G. M.; Germann, P. F.; Beven, K. J. Throughflow and solute transport in an isolated sloping soil block in a forested catchment. Journal of hydrology; Vol. 124, nos. 1/2 (Apr. 1991): p. 81-99.

323. Jackson, B. Managing water resources. Trends; Vol. 27, no. 4 (1990): p. 26-31.

324. Just, R. Recreational instream flows in Idaho : instream flows - they're not just for fish anymore. Rivers (Fort Collins, Colo.); Vol. 1, no. 4 (Oct. 1990): p. 307-312.

325. Mimikou, M. Regional hydrological effects of climate change. Journal of hydrology; Vol. 123, nos. 1/2 (Feb. 1991): p. 119-146.

326. Nash, L. L.; Gleick, P. H. Sensitivity of streamflow in the Colorado Basin to climatic changes. Journal of hydrology; Vol. 125, nos. 3/4 (July 1991): p. 221-241.

328. Robson, A.; Jenkins, A.; Neal, C. Towards predicting future episodic changes in stream chemistry. Journal of hydrology; Vol. 125, nos. 3/4 (July 1991): p. 161-174.

329. Ryan, S. E.; Grant, G. E. Downstream effects of timber harvesting on channel morphology in Elk River Basin, Oregon. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 60-72.

330. Sami, K.; Buttle, J. M. Comparison of measured and estimated unsaturated hydraulic conductivities during snowmelt. Journal of hydrology; Vol. 123, nos. 3/4 (Mar. 1991): p. 243-259.

331. Schmidt, R. A.; Gluns, D. R. Snowfall interception on branches of three conifer species. Canadian journal of forest research; Vol. 21, no. 8 (Aug. 1991): p. 1262-1269.

332. Scott, D. F.; Van Wyk, D. B. The effects of wildfire on soil wettability and hydrological behavior of an afforested catchment. Journal of hydrology; Vol. 121, nos. 1/4 (Dec. 15, 1990): p. 239-256.

333. Smettem, K. R. J. The Influence of macropores on runoff generation from a hillslope soil with a contrasting textural class. Journal of hydrology; Vol. 122, nos. 1/4 (Jan. 1991): p. 235-251.

334. Somach, S. L. The American River decision : balancing instream protection with other competing beneficial uses. Rivers (Fort Collins, Colo.); Vol. 1, no. 4 (Oct. 1990): p. 251-263.

335. Teklehaimanot, Z.; Jarvis, P. G.; Ledger, D. C. Rainfall interception and boundary layer conductance in relation to tree spacing. Journal of hydrology; Vol. 123, nos. 3/4 (Mar. 1991): p. 261-278.

336. Williams, J. D.; Buckhouse, J. C. Surface runoff plot design for use in watershed research. Journal of range management; Vol. 44, no. 4 (July 1991): p. 411-412.

103. GEOLOGY/MINERAL RESOURCES

337. Berner, R. A. Land plants and weathering. Science; Vol. 252, no. 5007 (May 10, 1991): p. 860.

104. CLIMATOLOGY/METEOROLOGY

345. Crosson, P. R.; Rosenberg, N. J. Adapting to climate change. Resources; No. 103 (spring 1991): p. 17-20.

346. Darmstadter, J. Estimating the cost of carbon dioxide abatement. Resources; No. 103 (spring 1991): p. 6-9.

347. Dixon, R. K. Responses and feedbacks of global forests to climate change. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 189-192. (General technical report INT ; 280).

348. Duguay, C. R.; LeDrew, E. F. Mapping surface albedo in the east slope of the Colorado Front Range, U.S.A., with with Landsat Thematic Mapper, Arctice and alpine research; Vol. 23, no. 2 (May 1991): p. 213-223.

350. Morrisette, P. M.; Plantinga, A. J. The global warming issue : viewpoints of different countries. Resources; No. 103 (spring 1991): p. 2-6.

351. Oates, W. E.; Portney, P. R. Economic incentives for controlling greenhouse gases. Resources; No. 103 (spring 1991): p. 13-16.

352. Rosswall, T. Greenhouse gases and global change : international collaboration. Environmental science & technology; Vol. 25, no. 4 (Apr. 1991): p. 567-573.

353. Toman, M. A.; Burtraw, D. Resolving equity issues in greenhouse gas negotiations. Resources; No. 103 (spring 1991): p. 10-13.

354. Verbyla, D. L. Predicting forest changes associated with climate warming : potential uses of GIS technology. Proceedings, management and productivity of western-montane forest soils : Boise, ID, April 10-12, 1990. Ogden, UT : U.S. Dept. of Agriculture, Forest Service, Intermountain Research Station, 1991: p. 193-195. (General technical report INT ; 280).

355. Vitousek, P. M. Can planted forests counteract increasing atmospheric carbon dioxide? Journal of environmental quality; Vol. 20, no. 2 (Apr./June 1991): p. 348-354.

110. ZOOLOGY

357. Lehman, N. Introgression of coyote mitochondrial DNA into sympatric North American gray wolf populations. Evolution; Vol. 45, no. 1 (1991): p. 104-119.

112. TERRESTRIAL ANIMALS

358. Andelt, W. F.; Kie, J. G. Variation in coyote diets associated with season and successional changes in vegetation. Journal of wildlife management; Vol. 51, no. 2 (Apr. 1987): p. 273-277.

359. Holl, S. A.; Bleich, V. C. Mineral lick use by mountain sheep in the San Gabriel Mountains, California. Journal of wildlife management; Vol. 51, no. 2 (Apr. 1987): p. 383-385.

361. Mech, L. D.; McRoberts, R. E. Relationship between age and mass among female white-tailed deer during winter and spring. Journal of mammalogy; Vol. 71, no. 4 (Nov. 1990): p. 686-689.

362. Mech, L. D.; McRoberts, R. E. Survival of white-tailed deer fawns in relation to maternal age. Journal of mammalogy; Vol. 71, no. 3 (Aug. 199): p. 465-467.

363. Mech, L. D.; Nelson, M. E.; McRoberts, R. E. Effects of maternal and grandmaternal nutrition on deer mass and vulnerability to wolf predation. Journal of mammalogy; Vol. 71, no. 1 (Feb. 1991): p. 146-151.

//

364. Nelson, M. E.; Mech, L. D. Weights, productivity, and mortality of old white-tailed deer. Journal of mammalogy; Vol. 71, no. 4 (Nov. 1990): p. 689-691.

365. Rogers, L. L. Seasonal changes in defecation rates of free-ranging white-tailed deer. Journal of wildlife management; Vol. 51, no. 2 (Apr. 1987): p. 330-333.

366. Wayne, R. K. Conservation genetics of the endangered Isle Royale gray wolf. Conservation biology; Vol. 5, no. 1 (Mar. 1991): p. 41-51.

115. ANIMAL ECOLOGY

368. Kessel, B. Birds of the Seward Peninsula, Alaska : their biogeography, seasonality, and natural history. [Fairbanks]: University of Alaska Press; c1989: x, 330 p.

369. Linkhart, B. D.; Reynolds, R. T. Brood division and postnesting behavior of flammulated owls. The Wilson bulletin; Vol. 99, no. 2 (June 1987): p. 240-243.

120. RANGE MANAGEMENT

370. Aguirre, L.; Johnson, D. A. Influence of temperature and cheatgrass competition on seedling development of two bunchgrasses. Journal of range management; Vol. 44, no. 4 (July 1991): p. 347-354.

371. Aguirre, L.; Johnson, D. A. Root morphological development in relation to shoot growth in seedlings of four range grasses. Journal of range management; Vol. 44, no. 4 (July 1991): p. 341-346.

372. Bastian, C. T. Multiple use of public rangeland : antelope and stocker cattle in Wyoming. Journal of range management; Vol. 44, no. 4 (July 1991): p. 390-394.

373. Borman, M. M.; Krueger, W. C.; Johnson, D. E. Effects of established perennial grasses on yields of associated annual weeds. Journal of range management; Vol. 44, no. 4 (July 1991): p. 318-322.

375. Dick, B. L.; Urness, P. J. Nutritional value of fresh Gambel oak browse for Spanish goats. Journal of range management; Vol. 44, no. 4 (July 1991): p. 361-364.

376. Fullmer, D. G. Sheep grazing for plantation release : a Foresthill Ranger District case study. Proceedings : Eighth Annual Forest Vegetation Management Conference, November 5-6, 1986, ... Sacramento, California. Redding, Calif. : printed by the Conference, 1987: p. 149-163.

377. Grazing statistical summary, fiscal year 1990 : (based on calendar year 1989 data). [Washington, D.C.] : USDA Forest Service, Range Management; [1991?]: [6], 94, x p.

378. Greacen, S. Public land grazing heats up. Forest watch; Vol. 11, no. 9 (Apr. 1991): p. 7.

379. Hanselka, C. W.; Paschal, J. C. Prickly pear cactus : a Texas rangeland enigma. Rangelands; Vol. 13, no. 3 (June 1991): p. 109-111.

380. Hardegree, S. P.; Emmerich, W. E. Variability in germination rate among seed lots of Lehmann lovegrass. Journal of range management; Vol. 44, no. 4 (July 1991): p. 323-326.

381. Hatfield, P. G.; Walker, J. W.; Glimp, H. A. Comparing the captec bolus to chromic oxide dosed twice daily using sheep in confinement. Journal of range management; Vol. 44, no. 4 (July 1991): p. 408-409.

382. Holbert, M. R. Whitehorse Butte Allotment : controversy to compromise. Rangelands; Vol. 13, no. 3 (June 1991): p. 125-128.

383. Holechek, J. L. Chihuahuan Desert rangeland, livestock grazing, and sustainability. Rangelands; Vol. 13, no. 3 (June 1991): p. 115-120.

384. Jameson, D. A. Effects of single season and rotation harvesting on cool-and warm-season grasses of a mountain grassland. Journal of range management; Vol. 44, no. 4 (July 1991): p. 327-329.

385. Johnson, D. A.; Aguirre, L. Effect of water on morphological development in seedlings of three range grasses : root branching patterns. Journal of range management; Vol. 44, no. 4 (July 1991): p. 355-360.

386. Jones, T. A.; Nielson, D. C.; Carlson, J. R. Developing a grazing tolerant native grass for bluebunch wheatgrass sites. Rangelands; Vol. 13, no. 3 (June 1991): p. 147-150.

387. Jun, D. J.; Allen, E. B. Physiological responses of 6 wheatgrass cultivars to mycorrhizae. Journal of range management; Vol. 44, no. 4 (July 1991): p. 336-341.

388. Loomis, J. B.; Kie, J. G. Cattle-deer interactions in the Sierra Nevada : a bioeconomic approach. Journal of range management; Vol. 44, no. 4 (July 1991): p. 395-399.

389. McFarland, M. L. Transplanting shrubs for revegetation of

salt-affected soils. Landscape and urban planning; Vol. 19, no. 4 (Dec. 1990): p. 377-381.

390. Murray, R. B.; Mayland, H. F.; Shewmaker, G. E. Response of montane tall-forb communities to 2,4-D and mixtures of 2,4-D and picloram. Journal of range management; Vol. 44, no. 4 (July 1991): p. 311-318.

391. Olawsky, C. D.; Smith, L. M. Lesser prairie-chicken densities on tebuthiuron-treated and untreated sand shinnery oak rangelands. Journal of range management; Vol. 44, no. 4 (July 1991): p. 364-368.

392. Pamo, E. T.; Pieper, R. D.; Beck, R. F. Range condition analysis : comparison of 2 methods in southern New Mexico desert grasslands. Journal of range management; Vol. 44, no. 4 (July 1991): p. 374-378.

393. Provenza, F. D. Range science and range management are complementary endeavors. Rangelands; Vol. 13, no. 3 (June 1991): p. 101-103.

394. Rangeland management : Forest Service not performing needed monitoring of grazing allotments : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1991: 8 p.

395. Ratliff, R. D.; Duncan, D. A.; Westfall, S. E. California oak-woodland overstory species affect herbage understory : management implications. Journal of range management; Vol. 44, no. 4 (July 1991): p. 306-310.

396. Rose, A. F. An alternative to fences. Rangelands; Vol. 13, no. 3 (June 1991): p. 144-145.

397. Schachtman, D. P.; Kelman, W. M. Potential of Lotus germplasm for the development of salt aluminum and manganese tolerant pasture plants. Australian journal of agricultural research; Vol. 42, no. 1 (1991): p.[139]-148.

398. Schuman, G. E.; Taylor, E. M.; Rauzi, F. Forage production of reclaimed mined lands as influenced by nitrogen fertilization and mulching practice. Journal of range management; Vol. 44, no. 4 (July 1991): p. 382-384.

399. Sedgwick, J. A.; Knopf, F. L. Prescribed grazing as a secondary impact in a western riparian floodplain. Journal of range management; Vol. 44, no. 4 (July 1991): p. 369-373.

400. Simanton, J. R. Revegetation of semiarid rangelands : problems, procedures, and probabilities. Rangelands; Vol. 13, no. 3 (June 1991): p. 129-132.

401. Templeton, B. R. The role and policies of the Bureau of Land Management in maintaining the nation's rangelands. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 235-238. (SAF publication ; 90-02).

402. Tueller, P. T. Vegetation science applications for rangeland analysis and management. Dordrecht: Kluwer Academic Publishers; 1988: xiii, 642 p. (Handbook of vegetation science; v. 14).

403. Vogel, K. P.; Moore, K. J.; Johnson, B. E. Statistical analyses for comparison of esophageal and hand-clipped samples from grazing trials. Journal of range management; Vol. 44, no. 4 (July 1991): p. 379-382.

404. White, M. R. Vegetational response to short-duration and continuous grazing in southcentral New Mexico. Journal of range management; Vol. 44, no. 4 (July 1991): p. 399-403.

405. Williamson, R. M. Change on the range : a new perspective for National Forest rangelands. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 239-242. (SAF publication ; 90-02).

406. Young, J. A.; Palmquist, D. E.; Evans, R. A. Temperature profiles for germination of big sagebrush seeds from native stands. Journal of range management; Vol. 44, no. 4 (July 1991): p. 385-390.

131. LAND USE--GENERAL

411. Bristow, R. S.; Curry, M. P. Scenic parkways in National Forests : institutional barriers to development. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 595-596. (SAF publication ; 90-02).

412. Carey, M.; Heimlich, R.; Brazee, R. A permanent wetland reserve : analysis of a new approach to wetland protection. Washington, D.C.: U.S. Dept. of Agriculture, Economic Research Service; 1990: 16 p. (Agriculture information bulletin; no. 610).

414. Earhart, J. E.; Shillinger, G. A summary of the U.S.-based private sector response to global conservation issues. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July

29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 407-412. (SAF publication ; 90-02).

416. Lunn, J. M.; Begalka, W. Partnerships : good neighbors working together. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 247-251. (SAF publication ; 90-02).

417. Miller, R. O. The Surface Mining Control and Reclamation Act (SMCRA) of 1977 : regulation of surface mining in SMCRA's second decade. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 274-280. (SAF publication ; 90-02).

418. Nuzzo, V. A.; Howell, E. A. Natural area restoration planning. Natural areas journal; Vol. 10, no. 4 (Oct. 1990): p. 201-209.

420. Sidle, R. C.; Sharpley, A. N. Cumulative effects of land management on soil and water resources : an overview. Journal of environmental quality; Vol. 20, no. 1 (Jan./Mar. 1991): p. 1-3.

421. Spoon, C. W. Keeping wilderness naturally wild. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 252-257. (SAF publication ; 90-02).

132. URBAN FORESTRY

422. Boerner, D. A. Laying down the right roots. Urban forests; Vol. 10, no. 4 (Aug./Sept. 1990): p. 8-11.

423. Gilbertson, P.; Bradshaw, A. D. The survival of newly planted trees in inner cities. Arboricultural journal; Vol. 14, no. 4 (Nov. 1990): p. 287-309.

424. Kourik, R.; Farrell, M. Ground rules for planting trees. Harrowsmith; Vol. 3, no. 17 (Sept./Oct. 1988): p. 89-93.

425. Lamb, R. J.; Purcell, A. T. Perception of naturalness in landscape and its relationship to vegetation structure. Landscape and urban planning; Vol. 19, no. 4 (Dec. 1990): p. 333-352.

426. Lipkis, A.; Lipkis, K. Taking it to the streets : inspiring public action. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 520-528. (SAF publication ; 90-02).

427. Moll, G. Planting new life in the city. Urban forests; Vol. 11, no. 2 (Apr./May 1991): p. 10-17.

133. AGROFORESTRY

430. Berna, D. F. Managing existing fencerows to improve their effectiveness as windbreaks. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 589-590. (SAF publication ; 90-02).

140. FOREST RECREATION

435. Brown, T. L. The public/private interface of outdoor recreation. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 458-463. (SAF publication ; 90-02).

436. Chilman, K. C. A recreation resource inventory system for managers of large wildland areas. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 608-609. (SAF publication ; 90-02).

437. Colyer, D.; Ferrise, A.; Grafton, W. Commercial recreation ventures on private forest lands : some recent trends. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 452-457. (SAF publication ; 90-02).

438. Dawson, C. P. The pro's and con's [i.e. pros and cons] of rural recreation development : a private sector perspective. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 446-451. (SAF publication ; 90-02).

439. Edelhertz, J. Training for trail users. Signpost; Vol. 26, no. 3 (Mar. 1991): p. 18-19.

440. Ewert, A. W. Outdoor recreation and the urban interface : addressing the issues through science and research. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 599-601. (SAF publication ; 90-02).

441. Forest Service : difficult choices face the future of the recreation program : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1991: 28 p.

442. Latteman, J. Negro Creek, Wenatchee National Forest, Washington. Signpost; Vol. 26, no. 3 (Mar. 1991): p. 38-39.

443. National Forests : administration of outfitter and guide policies at the Gallatin Forest : report to the Honorable Conrad Burns, U.S. Senate. Washington, D.C.: GAO; 1990: 25 p.

444. National Forests : special recreation areas not meeting established objectives : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1990: 51 p.

445. Parks and recreation : maintenance and reconstruction backlog on National Forest trails : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1989: 56 p.

447. Vollbon T. Horse riding in national parks : a management view. Australian parks & recreation; Vol. 26, no. 4 (summer 1990): p. [45], [47].

448. Whinam, J. Horse riding in the national parks : a response. Australian parks & recreation; Vol. 26, no. 4 (summer 1990): p. [41], [44].

449. Wilderness preservation : problems in some National Forests should be addressed : report to the chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1989: 91 p.

150. SOCIAL SCIENCE AND EDUCATION

451. Betz, C. J. Importance/performance analysis as a tool for assessing rural quality of life : the impact of leisure services. Proceedings, 1987 Southeastern Recreation Research Conference, February 18-20, 1987, Asheville, North Carolina. Athens, GA : Dept. of Recreation and Leisure Studies, University of Georgia, 1988: p. 104-121.

452. Deitemeyer, S. W. Resource training for wilderness managers. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 269-271. (SAF publication ; 90-02).

454. Field, R. J. The changing face of forest resource users : developing black natural resources professionals. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 535-540. (SAF publication ; 90-02).

455. Gramann, J. H. Proceedings, the Third Symposium on Social Science in Resource Management : May 16 through 19, 1990, Rudder Conference Center, Texas A&M University. [College Station, Tex.?: Texas A&M University?; 1990]: 189 p.

456. Hill, D. B. Educating forest landowners : stewardship and management. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 478-483. (SAF publication ; 90-02).

457. Knotts, D. M. Designing a quality forest education program : research and reality. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 484-488. (SAF publication ; 90-02).

459. Ostermeier, D. M. Professional development and skill building : what do we need to know? Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 546-549. (SAF publication ; 90-02).

461. Tippets, D. W.; Anderson, V. J. Partnership preserves historic range research sites. Rangelands; Vol. 13, no. 3 (June 1991): p. 121-124.

462. Upton, D. L. The training and development needs of professional foresters. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 550-552. (SAF publication ; 90-02).

463. Wetherill, G. R. Who are the forest users? : Society,

culture and values in the 1990's. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 541-545. (SAF publication ; 90-02).

160. ECOSYSTEMS

464. Davis, G. E. Monitoring natural resources. Trends; Vol. 27, no. 4 (1990): p. 32-37.

465. Dennis, J.; Ruggiero, M. Conserving biological diversity. Trends; Vol. 27, no. 4 (1990): p. 4-7.

466. Hiebert, R. Managing alien plants. Trends; Vol. 27, no. 4 (1990): p. 12-16.

469. O'Brien, S. J.; Mayr, E. Bureaucratic mischief : recognizing endangered species and subspecies. Science; Vol. 251, no. 4998 (Mar. 8, 1991): p. 1187-1188.

470. Shelton, N. Preserving rare species. Trends; Vol. 27, no. 4 (1990): p. 8-11.

170. WILDLIFE MANAGEMENT

471. Alaska wildlife refuges : restrictive criteria used to recommend additional wilderness : report to the chairman, Subcommittee on Water, Power and Offshore Energy Resources, Committee on Interior and Insular Affairs, House of Representatives. Washington, D.C.: GAO; 1989: 29 p.

472. Almand, J. D. Fish and Wildlife 2000 : a roadway to the 21st century. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 243-246. (SAF publication ; 90-02).

473. Endangered species : spotted owl petition evaluation beset by problems : report to the chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, Committee on Merchant Marine and Fisheries, House of Representatives. Washington, D.C.: GAO; 1989: 22 p.

475. Gogan, P. J. P. Considerations in the reintroduction of native mammalian species to restore natural ecosystems. Natural areas journal; Vol. 10, no. 4 (Oct. 1990): p. 210-217.

478. Wright, G. Managing wildife in national parks. Trends; Vol. 27, no. 4 (1990): p. 17-21.

212. FOREST PRODUCTS--ECONOMICS

485. Ince, P. J. Timber market implications of accelerated wastepaper recycling in the 1990s. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 438-445. (SAF publication ; 90-02).

486. Ince, P. J. Timber market implications of recycling. FOCUS '95+ : Landmark Paper Recycling Symposium : Atlanta, Georgia, March 19-21, 1991. Atlanta, GA : TAPPI Press, 1991: p. 51-59. (TAPPI notes).

220. FOREST PRODUCTS ENGINEERING

488. Ross, R. J.; Pellerin, R. F. Nondestructive testing for assessing wood members in structures : a review. [Madison, Wis.]: U.S. Dept. of Agriculture, Forest Service, Forest Products Laboratory; 1991: 27 p. (General technical report FPL; GTR-70).

489. Ross, R. J.; Geske, E. A.; Larson, G. R. Transverse vibration nondestructive testing using a personal computer. [Madison, Wis.]: U.S. Dept. of Agriculture, Forest Service, Forest Products Laboratory; 1991: 17 p. (Research paper FPL; RP-502).

221. WOOD CONVERSION, HANDLING AND PROCESSING

492. McNickle, D. C.; Woollons, R. C. Analysis and simulation of a logging weighbridge installation. New Zealand journal of forestry science; Vol. 20, no. 1 (1990): p. 111-119.

496. Yaussy, D. A.; Brisbin, R. L. STUMP : a system of timber utilization and mill processing. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 613-614. (SAF publication ; 90-02).

230. WOOD PROPERTIES

497. Lindgren, L. O. Medical CAT-scanning : X-ray absorption coefficients, CT-numbers and their relation to wood density. Wood science and technology; Vol. 25, no. 5 (July 1991): p. [341]-349.

231. ANATOMY AND GROWTH FACTORS

500. El Kouali, M.; Vergnaud, J. M. Modeling the process of absorption and desorption of water above and below the fiber saturation point. Wood science and technology; Vol. 25, no. 5 (July 1991): p. [327]-339.

232. PHYSICAL AND MECHANICAL PROPERTIES

502. Lam, F.; Varoglu, E. Variation of tensile strength along the length of lumber. Part 1, Experimental. Wood science and technology; Vol. 25, no. 5 (July 1991): p. [351]-359.

243. WOOD PRESERVATION

508. Willeitner, H.; Marshment, B. J. Possibilities and limits of chemical wood preservation. [Madison, Wis.: Forest Products Laboratory; 1990]: 13 leaves.

250. WOOD UTILIZATION

510. Weiss, J. Christmas tree disposal : a focus on holiday, 1990. American christmas tree journal; Vol. 35, no. 2 (Apr. 1991): p. 42-44.

260. COMPOSITE PRODUCTS

515. Rice, J. T. Gluing of archaeological wood. Archaeological wood : properties, chemistry, and preservation. Washington, DC : American Chemical Society, 1990: p. [373]-397. (Advances in chemistry series ; 225).

518. Vick, C. B.; Krzysik, A.; Wood, J. E. Acetylated, isocyanate-bonded flakeboards after accelerated aging : dimensional stability and mechanical properties. Hols als Roh- und Werkstoff; Vol. 49 (1991): p. [221]-228.

280. PULP AND PAPER

520. FOCUS '95+ : Landmark Paper Recycling Symposium : Atlanta, Georgia, March 19-21, 1991. Atlanta, GA: TAPPI Press; 1991: viii, 415 p. (TAPPI notes).

282. PAPER AND PAPER PRODUCTS

532. Andrady, A. L.; Parthasarathy, V. R.; Song, Y. Weathering of paperboard used in consumer packaging applications : a litter simulation study. Tappi journal; Vol. 74, no. 7 (July 1991): p. 185-194.

300. OTHER TOPICS

538. Blank, G. B. How to be your best in a media interview. Are forests the answer? : Proceedings of the 1990 Society of American Foresters National Convention, Washington, DC, July 29-August 1. Bethesda, Md. : Society of American Foresters, c1990: p. 474-477. (SAF publication ; 90-02).

539. Kuyper, B. J. Bringing up scientists in the art of critiquing research. BioScience; Vol. 41, no. 4 (Apr. 1991): p. 248-250.

MINERALS/MINERALOGY

G001. Clastic lawsonite, glaucophane, and jadeitic pyroxene in Franciscan metagraywackes from the Diablo Range, California: Alternative interpretation.
Raymond-Loren-A
Appalachian State Univ., Boone, NC, United-States
Geological-Society-of-America-Bulletin. 103. (7). p. 970-972.
20 Refs.
1991

G002. Clay mineral diagenesis in core KM-3 of Searles Lake, California.
Hay-R-L; Guldman-S-G; Matthews-J-C; Lander-R-H; Duffin-M-E; Kyser-T-K
Univ. Ill., Dep. Geol., United-States
Clays-and-Clay-Minerals. 39. (1). p. 84-96.
37 Refs.
1991

G003. Consistent geologic areas for epithermal gold-silver deposits in the Walker Lake Quadrangle of Nevada and California; delineated by quantitative methods.
Harris-DeVerle-P; Pan-Guocheng
Univ. Ariz., Dep. Min. and Geol. Eng., Tucson, AZ, United-States
Economic-Geology-and-the-Bulletin-of-the-Society-of-Economic-Geologists.
86. (1). p. 142-165.
67 Refs.
1991

G004. Epithermal deposition of gold during transition from propylitic to potassic alteration at Round Mountain, Nevadareply.
Sander-Mark-V; Einaudi-Marco-T
Magma Copper Co., Tucson, AZ, United-States; Stanford Univ., United-States
Economic-Geology-and-the-Bulletin-of-the-Society-of-Economic-Geologists.
86. (4). p. 894-897.
9 Refs.
1991

G005. First early Mesozoic amber in the Western Hemisphere.
Litwin-Ronald-J; Ash-Sidney-R
U. S. Geol. Surv., Reston, VA, United-States; Weber State Univ., United-States
Geology-(Boulder). 19. (3). p. 273-276.
30 Refs.
1991

G006. Genesis of sediment-hosted disseminated-gold deposits by fluid mixing and sulfidization; chemical-reaction-path modeling of ore-depositional processes documented in the Jerritt Canyon District, Nevada.
Hofstra-A-H; Leventhal-J-S; Northrop H-R; Landis-G-P; Rye-Robert-O; Birak-D-J; Dahl-A-R
U. S. Geol. Surv., Denver, CO, United-States; Independence Min. Co United-States
Geology-(Boulder). 19. (1). p. 36-40.
8 Refs.
1991

G007. Genesis of the tabular-type vanadium-uranium deposits of the Henry Basin, Utah--reply.
Goldhaber-Martin-B; Wanty-Richard-B; Landis-Gary-P; Reynolds-Richard-L; Grauch-Richard-I; Whitney-C-Gene; Rye-Robert-O
U. S. Geol. Surv., Denver, CO, United-States
Sillitoe, Richard H., Camus, Francisco. A special issue devoted to gold deposits in the Chilean Andes. 27 West Hill Park, London, United Kingdom.
Economic-Geology-and-the-Bulletin-of-the-Society-of-Economic-Geologists.
86. (6). p. 1353-1355.
6 Refs.
1991

G008. Microbial precipitation of pedogenic calcite.
Monger-H-Curtis; Daugherty-LeRoy-A; Lindemann-William-C; Liddell-Craig-M
N.M. State Univ., Dep. Agron. and Hortic., Las Cruces, NM, United-States
Geology-(Boulder). 19. (10). p. 997-1000.
25 Refs.
1991

G009. Regional study of mineral resources in Nevada; insights from three-dimensional analysis of gravity and magnetic anomalies.
Blakely-Richard-J; Jachens-Robert-C
U. S. Geol. Surv., Menlo Park, CA, United-States
Geological-Society-of-America-Bulletin. 103. (6). p. 795-803.
28 Refs.
1991

G010. Western Old Woman Mountains shear zone; evidence for late ductile extension in the Cordilleran orogenic belt.
Carl-Brian-S; Miller-Calvin-F; Foster-David-A
Vanderbilt Univ., Nashville, TN, United-States; State Univ. N.Y., United-States
Geology-(Boulder). 19. (9). p. 893-896.
32 Refs.
1991

G011. Zoning and genesis of the Darwin Pb-Zn-Ag skarn deposit, California; a reinterpretation based on new data.
Newberry-Rainer-J; Einaudi-Marco-T; Eastman-Harvey-S
Univ. Alaska, Dep. Geol., Fairbanks, AK, United-States; Stanford Univ., United-States; Bond Gold Explor., United-States

Economic-Geology-and-the-Bulletin-of-the-Society-of-Economic-Geologists.
86. (5). p. 960-982.
31 Refs.
1991

PETROLEUM/PETROLEUM ENGINEERING

C012. (14)C ages of hydrothermal petroleum and carbonate in Guaymas Basin, Gulf of California; implications for oil generation, expulsion, and migration.
Peter-J-M; Peltonen-P; Scott-Steven-D; Simoneit-Bernd-R-T; Kawka-Orest-E-M
Univ. Toronto, Mar. Geol. Res. Lab., Toronto, ON, Canada; Oreg. State Univ., United-States
Geology-(Boulder). 19. (3). p. 253-256.
33 Refs.
1991

C013. Active oil seep at Nevada gold mine holds intrigue for more exploration.
Pinnell-Michael-L; Blake-Jason-G; Hulen-Jeffrey-B
Pioneer Oil and Gas, Midvale, UT, United-States; Univ. Utah Res. Inst., United-States
Oil-and-Gas-Journal. 89. (28). p. 74-79.
17 Refs.
1991

C014. Challenge facing oil explorers in Nevada.
Flanigan-Ted
Flanigan & Flanigan, Reno, NV, United-States
Anonymous. AAPG Rocky Mountain Section meeting; abstracts. AAPG-Bulletin. 75. (6). p. 1126
1991
AAPG Rocky Mountain Section meeting, Billings, MT, July 28-31, 1991

C015. Clues point to oil in Arizona's deep Tertiary.
Rauzi-Steven-L
Ariz. Oil & Gas Conserv. Comm., Phoenix, AZ, United-States
Oil-and-Gas-Journal. 89. (29). p. 107-110.
7 Refs.
1991

C016. Evaluating the reservoir potential of Mississippian structures.
Ahr-Wayne-M
Tex. A&M Univ., College Station, TX, United-States
Anonymous. AAPG Southwest Section meeting; abstracts. AAPG-Bulletin. 75. (1). p. 198
1991
AAPG Southwest Section meeting, Abilene, TX, Feb. 2-12, 1991

C017. Facies analysis of the Monterey Formation in the northern Santa Barbara Channel.
Hornafius-J-Scott
Mobil Explor. and Prod., U. S. Bakersfield Div., Bakersfield, CA, United-States
AAPG-Bulletin. 75. (5). p. 894-909.
59 Refs.
1991

C018. A faulted Devonian play in New Mexico; an integrated approach.
Burnett-Mike; Snyder-Gary
Consultant, Dallas, TX, United-States; Oryx Energy, United-States
Anonymous. AAPG Southwest Section meeting; abstracts. AAPG-Bulletin. 75. (1). p. 198
1991
AAPG Southwest Section meeting, Abilene, TX, Feb. 2-12, 1991

C019. The fractured Green River and Wasatch formations of the Uinta basins, Utah; ideal targets for horizontal drilling.
Chidsey-Thomas-C; Morgan-Craig-D; Laine-Michael-D
Utah Geol. and Miner. Surv., Salt Lake City, UT, United-States; Utah Div. Oil, Gas & Min., United-States
Anonymous. AAPG Rocky Mountain Section meeting; abstracts. AAPG-Bulletin. 75. (6). p. 1123-1124
1991
AAPG Rocky Mountain Section meeting, Billings, MT, July 28-31, 1991

C020. How 12 geochemical methods fared in GERT Project in Permian Basin.
Calhoun-Gerry-G
Indep. Geol., Midland, TX, United-States
Oil-and-Gas-Journal. 89. (19). p. 62-68.
10 Refs.
1991

C021. Large accumulations of oil likely beneath thrust faults in East Temblor Range area.
Simonson-Russell-R
Oil-and-Gas-Journal. 89. (17). p. 69-72
1991

C022. Lithofacies and cyclicity of the Yates Formation, Permian Basin; implications for reservoir heterogeneity.
Borer-J-M; Harris-P-M
Chevron Oil Field Res. Co., La Habra, CA, United-States
AAPG-Bulletin. 75. (4). p. 726-779.
82 Refs.
1991

G023. Prediction of reservoir geometries in the Morrow of southeastern New Mexico.
Mazzullo-Louis-J
Consultant, Midland, TX, United-States
Anonymous. AAPG Mid-Continent Section meeting; abstracts. AAPG-Bulletin. 75. (8). p. 1396
1991
AAPG Mid-Continent Section meeting, Wichita, KS, Sept. 22-24, 1991

G024. Rare wildcat drilling in remote Arizona strip.
Brennan-Daniel-J
Regul. Compliance Spec., Scottsdale, AZ, United-States
Oil-and-Gas-Journal. 89. (40). p. 108-110.
1 Refs.
1991

G025. Seismic exploration in the Dalhart Basin, western Texas Panhandle.
Walker-P-David
Soc. Explor. Geophys., Amarillo, TX, United-States
Anonymous. AAPG Southwest Section meeting; abstracts. AAPG-Bulletin. 75. (1). p. 203
1991
AAPG Southwest Section meeting, Abilene, TX, Feb. 2-12, 1991

G026. Sequence stratigraphic framework of the Devonian Guilmette Formation, Pahranagat Range, Southeast Nevada.
Estes-Jane-E
Colo. Sch. Mines, Golden, CO, United-States
Anonymous. AAPG Rocky Mountain Section meeting; abstracts. AAPG-Bulletin. 75. (6). p. 1125-1126
1991
AAPG Rocky Mountain Section meeting, Billings, MT, July 28-31, 1991

G027. Thermal maturity trends from Rock-Eval and vitrinite reflectance analysis on potential source rocks in eastern Nevada.
Barker-Charles-E; Peterson-James-A; Poole-Forrest-G
U. S. Geol. Surv., Denver, CO, United-States
Anonymous. AAPG Rocky Mountain Section meeting; abstracts. AAPG-Bulletin. 75. (6). p. 1123
1991
AAPG Rocky Mountain Section meeting, Billings, MT, July 28-31, 1991

G028. Vada Devonian Field; a Tatum Basin Devonian oil discovery.
Johnson-Ronaldo
Texian Explor., Midland, TX, United-States
Anonymous. AAPG Southwest Section meeting; abstracts. AAPG-Bulletin. 75. (1). p. 200
1991
AAPG Southwest Section meeting, Abilene, TX, Feb. 2-12, 1991

STRUCTURAL GEOLOGY

G029. Anomalous folds associated with the east-central part of the Garlock Fault, Southeast California.
Smith-George-I
U. S. Geol. Surv., Menlo Park, CA, United-States
Geological-Society-of-America-Bulletin. 103. (5). p. 615-624.
44 Refs.
1991

G030. Basin development and syntectonic sedimentation associated with kinematically coupled strike-slip and detachment faulting, southern Nevada.
Duebendorfer-Ernest-M; Wallin-E-Timothy
Univ. Nev., Dep. Geosci., Las Vegas, NV, United-States
Geology-(Boulder). 19. (1). p. 87-90.
25 Refs.
1991

G031. Fracture swarms in low-permeability-sandstone gas reservoir rocks in New Mexico, Colorado, and Wyoming; implications for exploration and development.
Laubach-S-E
Univ. Tex. at Austin, Bur. Econ. Geol., Austin, TX, United-States
Anonymous. AAPG Rocky Mountain Section meeting; abstracts. AAPG-Bulletin. 75. (6). p. 1130-1131
1991
AAPG Rocky Mountain Section meeting, Billings, MT, July 28-31, 1991

G032. Heterogeneous deformation in a ductile fold-thrust belt; the Proterozoic structural history of the Tusas Mountains, New Mexico.
Williams-Michael-L
Univ. Mass., Dep. Geol. and Geogr., Amherst, MA, United-States
Geological-Society-of-America-Bulletin. 103. (2). p. 171-188.
47 Refs.
1991

G033. High-angle origin of the currently low-angle Badwater turtleback fault, Death Valley, California.
Miller-Martin-G
Univ. Wash., Dep. Geol. Sci., Seattle, WA, United-States
Geology-(Boulder). 19. (4). p. 372-375.
19 Refs.
1991

G034. Jurassic normal and strike-slip faults at Crater Island, northwestern Utah.
Miller-David-M; Allmendinger-Richard-W
U. S. Geol. Surv., Menlo Park, CA, United-States; Cornell Univ., United-States
Geological-Society-of-America-Bulletin. 103. (9). p. 1239-1251.
66 Refs.
1991

G035. Lower Jurassic unconformity (J-0) from the Colorado Plateau to the eastern Mojave Desert; evidence of a major tectonic event at the close of the Triassic.
Marzolf-John-E
South. Ill. Univ., Dep. Geol., Carbondale, IL, United-States
Geology-(Boulder). 19. (4). p. 320-323.
25 Refs.
1991

G036. An offset Holocene stream channel and the rate of slip along the northern reach of the San Jacinto fault zone, San Bernardino Valley, California.
Wesnousky-Steven-G; Prentice-Carol-S; Sieh-Kerry-E
Mackay Sch. Mines, Cent. Neotectonic Stud., Reno, NV, United-States; Calif. Inst. Technol., United-States
Geological-Society-of-America-Bulletin. 103. (5). p. 700-709.
19 Refs.
1991

G037. Papoose Flat Pluton; forceful expansion or postemplacement deformation?.
Paterson-Scott-R; Brudos-Tom; Fowler-Ken; Carlson-Chris; Bishop-Kim; Vernon-Ron-H
Univ. South. Calif., Dep. Geol. Sci., Los Angeles, CA, United-States; Macquarie Univ., Australia
Geology-(Boulder). 19. (4). p. 324-327.
21 Refs.
1991

G038. Piggyback basin in the Sevier orogenic belt, Utah; implications for development of the thrust wedge.
Lawton-Timothy-F; Trexler-James-H Jr
N.M. State Univ., Dep. Earth Sci., Las Cruces, NM, United-States; Univ. Nev., United-States
Geology-(Boulder). 19. (8). p. 827-830.
23 Refs.
1991

G039. Stratigraphic effects of change from internal to external drainage in an extending basin, southeastern Nevada.
Di-Guiseppi-W-H; Bartley-J-M
Univ. Utah, Dep. Geol. and Geophys., Salt Lake City, UT, United-States
Geological-Society-of-America-Bulletin. 103. (1). p. 48-55.
27 Refs.
1991

G040. Temperature and pressure of mylonitization in a Tertiary extensional shear zone, Ruby Mountains-East ! aboldt Range, Nevada; tectonic implications.
Hurlow-Hugh-A; Snoke-Arthur-W; Hodges-Kip-V
Univ. Wyo., Dep. Geol. and Geophys., Laramie, WY, United-States; Mass. Inst. Technol., United-States
Geology-(Boulder). 19. (1). p. 82-86.
26 Refs.
1991

G034. Jurassic normal and strike-slip faults at Crater Island, northwestern Utah.
Miller-David-M; Allmendinger-Richard-W
U. S. Geol. Surv., Menlo Park, CA, United-States; Cornell Univ., United-States
Geological-Society-of-America-Bulletin. 103. (9). p. 1239-1251.
66 Refs.
1991

G035. Lower Jurassic unconformity (J-0) from the Colorado Plateau to the eastern Mojave Desert; evidence of a major tectonic event at the close of the Triassic.
Marzolf-John-E
South. Ill. Univ., Dep. Geol., Carbondale, IL, United-States
Geology-(Boulder). 19. (4). p. 320-323.
25 Refs.
1991

G036. An offset Holocene stream channel and the rate of slip along the northern reach of the San Jacinto fault zone, San Bernardino Valley, California.
Wesnousky-Steven-G; Prentice-Carol-S; Sieh-Kerry-E
Mackay Sch. Mines, Cent. Neotectonic Stud., Reno, NV, United-States; Calif. Inst. Technol., United-States
Geological-Society-of-America-Bulletin. 103. (5). p. 700-709.
19 Refs.
1991

G037. Papoose Flat Pluton; forceful expansion or postemplacement deformation?.
Paterson-Scott-R; Brudos-Tom; Fowler-Ken; Carlson-Chris; Bishop-Kim; Vernon-Ron-H
Univ. South. Calif., Dep. Geol. Sci., Los Angeles, CA, United-States; Macquarie Univ., Australia
Geology-(Boulder). 19. (4). p. 324-327.
21 Refs.
1991

G038. Piggyback basin in the Sevier orogenic belt, Utah; implications for development of the thrust wedge.
Lawton-Timothy-F; Trexler-James-H Jr
N.M. State Univ., Dep. Earth Sci., Las Cruces, NM, United-States; Univ. Nev., United-States
Geology-(Boulder). 19. (8). p. 827-830.
23 Refs.
1991

G039. Stratigraphic effects of change from internal to external drainage in an extending basin, southeastern Nevada.
Di-Giuseppi-W-H; Bartley-J-M
Univ. Utah, Dep. Geol. and Geophys., Salt Lake City, UT, United-States
Geological-Society-of-America-Bulletin. 103. (1). p. 48-55.
27 Refs.
1991

G040. Temperature and pressure of mylonitization in a Tertiary extensional shear zone, Ruby Mountains-East Humboldt Range, Nevada; tectonic implications.
Hurlow-Hugh-A; Snoke-Arthur-W; Hodges-Kip-V
Univ. Wyo., Dep. Geol. and Geophys., Laramie, WY, United-States; Mass. Inst. Technol., United-States
Geology-(Boulder). 19. (1). p. 82-86.
26 Refs.
1991

Step 1

Indicate here the date of this Monthly Alert:

OCTOBER (Month) 1991 (Year)

Mark in the spaces below the number(s) of the item(s) you are requesting:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Please request no more than 20 items. These publications will be sent to you as RETENTION COPIES or as LIBRARY LOANS.

Step 2

Please read the Copyright information below and sign the provided statement. Your signature is needed under provisions of the new U.S. Copyright law.

NOTICE:
WARNING CONCERNING
COPYRIGHT RESTRICTIONS

- The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material.
- Under certain conditions specified in the law libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.
- This institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law.

I accept responsibility for compliance should restrictions apply to documents I am requesting.

_____
(Signature)

Step 3

Fill in your name, organizational and unit name, and mailing address including zip code.

_____
Name (please print)

_____
Job Title

_____
Office Name and Location

_____
Mail Code

_____
Telephone (FTS if available)

MONTHLY ALERT **items cannot be sent to home addresses.**

NOTICE

This issue expires 8/1/92 when ALERT numbers no longer apply. After the expiration date, give a full bibliographic citation when you ask for a publication.

END

8-17-92